

PCT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 16 August 2000 (16.08.00)	
International application No. PCT/SE99/02485	Applicant's or agent's file reference PD53297PC/JF
International filing date (day/month/year) 23 December 1999 (23.12.99)	Priority date (day/month/year) 23 December 1998 (23.12.98)
Applicant SCHLEIMANN-JENSEN, Johan et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

07 July 2000 (07.07.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

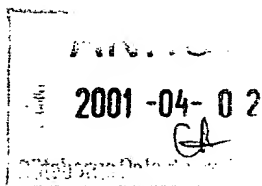
<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p>Authorized officer</p> <p>Charlotte ENGER</p> <p>Telephone No.: (41-22) 338.83.38</p>
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PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

GÖTEBORGS PATENTBYRA DAHLS AB
Sjöporten 4
S-417 64 Göteborg
SUEDE



PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year) 28.03.2001

Applicant's or agent's file reference
PD53297PC/JF

IMPORTANT NOTIFICATION

International application No.
PCT/SE99/02485

International filing date (day/month/year)
23/12/1999

Priority date (day/month/year)
23/12/1998

Applicant
JENSEN ELEKTRONIK AB et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PD53297PC/JF		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
FOR FURTHER ACTION			
International application No. PCT/SE99/02485	International filing date (day/month/year) 23/12/1999	Priority date (day/month/year) 23/12/1998	
International Patent Classification (IPC) or national classification and IPC H01T1/24			
Applicant JENSEN ELEKTRONIK AB et al.			



- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 2 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 04/07/2000	Date of completion of this report 28.03.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Gianni, G Telephone No. +49 89 2399 2660 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/SE99/02485

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

Description, pages:

1-7 as originally filed

Claims, No.:

1-17 as received on 20/02/2001 with letter of 20/02/2001

Drawings, sheets:

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/SE99/02485

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☐ claims Nos. .

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 1-17(partly).

2. A meaningful international preliminary examination report cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims 1-17

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/SE99/02485

	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-17
Industrial applicability (IA)	Yes:	Claims	1-17
	No:	Claims	

2. Citations and explanations
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Concerning item III

- 1). Claiming as a method step to use the chemical vapour deposition is not allowable since this aspect was not searched and was not the subject-matter of a claim as filed.

Concerning item V

- 1). The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

It is however generally known to the person skilled in the art that the feature of using a physical vapour deposition or a chemical vapour deposition are an equivalent to the feature of mechanical deposition and can be interchanged with that feature where circumstances make it desirable.

This represents a slight constructional change in the method of applying an inert coating on the electrodes which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claim 1 lacks an inventive step.

- 2). The features disclosed in claims 2 - 8 are not inventive, because they concern constructional details coming within the scope of the customary practice followed by a person skilled in the art, especially as the advantages thus achieved can readily be contemplated in advance.
- 3). For the same reasons as above the subject-matter of claim 9 appears to lack an inventive step (Article 33(3) PCT).
- 4). Dependent claims 10 - 17 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step since said features have been employed for the same purpose in similar situations (see documents D1: US-A-4 407 849 and D2: US-A-4 037 266).

C nc rning item VIII

- 1). As explained below, some of the features in the apparatus claim 1 relate to a method of using the apparatus rather than clearly defining the apparatus in terms of its technical features. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.

A chemically inert surface has been arranged onto the electrodes using PVD or CVD is a method step and not an apparatus feature since this feature cannot be recognized and differentiate from an inert surface arranged mechanically.

- 2). Claim 4 is making reference of claim 1 , but in this latter claim no metal is mentioned.
- 3). Claim 5 is claiming a dependency to claim 1 in which no carbon was mentioned.
- 4). Apparatus claim 7 discloses the use of sputtering which is a method step and not an apparatus feature. Moreover sputtering is well known in the art.
- 5). Claim 9 is redundant with present claim 1 since in the present case no distinction is made between the apparatus and the method claim.
- 6). Several of the dependent method claims disclose apparatus features instead of real method steps.
- 7). Claiming as a method step to use the chemical vapour deposition is not allowable since this aspect was not searched and was not the subject-matter of a claim as filed.
Moreover, the concept of physical vapour deposition is not clear when compared to the one of mechanical deposition.

PCT/SE99/02486

CLAIMS

1. Gas discharge tube comprising at least two electrodes and at least one hollow insulator fastened to at least one of the electrodes, and whereby said at least two electrodes have a
5 chemically inert surface,
characterized in
that the chemically inert surface has been arranged onto the electrodes using a physical vapour deposition or a chemical vapour deposition.
- 10 2. Gas discharge tube according to claim 1,
wherein the chemically inert surface is selected from the group of carbon, gold, and platinum.
3. Gas discharge tube according to claim 1,
15 wherein the carbon is arranged in addition of a metal.
4. Gas discharge tube according to claim 1,
wherein the metal is chromium or titanium.
- 20 5. Gas discharge tube according to claim 1-4,
wherein said carbon is present as polymorph of carbon, such as diamond, diamond-like carbon or graphite.
6. Gas discharge tube according to claim 5,
25 wherein the carbon is present as graphite in addition to a metal.
7. Gas discharge tube according to one or more of claims 1-6,
wherein the carbon has been arranged using sputtering.
- 30 8. Gas discharge tube according to one or more of the preceding claims,
wherein the carbon is present in a layer having a thickness of 1 μm .

9. Method for the manufacture of gas discharge tubes comprising at least two electrodes, and at least one hollow insulator fastened to the electrodes, and whereby said at least two electrodes have a chemically inert surface, characterized in

5 that the chemically inert surface is applied onto the electrodes using a physical vapour deposition or a chemical vapour deposition.

10 10. Method according to claim 9, wherein the chemically inert surface is selected from the group of carbon, gold, and platinum.

11. Method according to claim 10, wherein the carbon is arranged in addition of a metal.

15 12. Method according to claim 11, wherein the metal is chromium or titanium.

20 13. Method according to claim 9-12, wherein said carbon is present as polymorph of carbon, such as diamond, diamond-like carbon or graphite.

14. Method according to claim 13, wherein the carbon is present as graphite in addition to a metal.

25 15. Method according to one or more of claims 9-14, wherein the carbon has been arranged using sputtering.

30 16. Method according to one or more of claims 9-15, wherein the deposition of carbon takes place in an atmosphere of methane.

17. Method according to claims 9-16, wherein the carbon is present in a layer having a thickness of 1 μm .